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(71) Applicant (for all designated States except US): THE REGENTS OF THE UNIVERSITY OF CALIFORNIA [US/US]; 1111 Franklin Street, Oakland, CA 94607-5200 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): DOWDY, Stephen,

F. [US/US]; 5761 Waverly Avenue, La Jolla, CA 92037 (US). WADIA, Jehangir, S. [CA/US]; 3205-12 Via Ali-cante, La Jolla, CA 92137 (US).

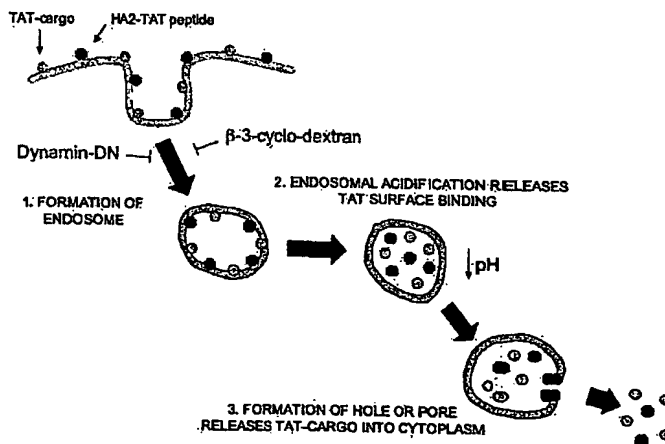
(74) Agent: BAKER, Joseph, R., Jr.; Fish & Richardson P.C., 12390 El Camino Real, San Diego, CA 92130 (US).

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(54) Title: POLYPEPTIDE TRANSDUCTION AND FUSOGENIC PEPTIDES



(57) Abstract: Due to the barrier imposed by the cell membrane, delivery of macromolecules in excess of 500 Daltons directly into cells remains problematic. However, proteins, which have been evolutionarily selected to perform specific functions, are therefore an attractive therapeutic agent to treat a variety of human diseases. In practice, the direct intracellular delivery of these proteins has, until recently, been difficult to achieve due primarily to the bioavailability barrier of the plasma membrane, which effectively prevents the uptake of the majority of peptides and proteins by limiting their passive entry. However, recent work using small cationic peptides, termed protein transduction domains (PTDs), derived from polynucleotide binding proteins, such as HIV TAT protein or the Drosophila transcription factor Antp. or synthetic poly-Arginine, have now been shown to deliver a myriad of molecules, including synthetic small molecules, peptides and proteins, into animal models *in vivo*.

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